

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
16 December 2004 (16.12.2004)

PCT

(10) International Publication Number  
**WO 2004/108633 A1**

- (51) International Patent Classification<sup>7</sup>: **C07B 39/00**, (81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (21) International Application Number: PCT/GB2004/002339
- (22) International Filing Date: 3 June 2004 (03.06.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 0313110.9 7 June 2003 (07.06.2003) GB
- (71) Applicant (*for all designated States except US*): AVECIA LIMITED [GB/GB]; Hexagon House, Blackley, Manchester M9 8ZS (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): MOODY, David, John [GB/GB]; Wellbrae House, Wellbrae, Falkland, Fife KY15 7AY (GB). HAMILL, Noel, Anthony [IE/GB]; PO Box 521, Leeds Road, Huddersfield, West Yorkshire HD2 1GA (GB).
- (74) Agents: GAIRNS, Raymond, Stevenson et al.; AVECIA Ltd, Intellectual Property Group, PO Box 42, Hexagon House, Blackley, Manchester M9 8ZS (GB).
- (84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
- with international search report
  - before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: PROCESS FOR THE PREPARATION OF ARYL DIAZONIUM SALTS AND REACTION WITH NUCLEOPHILES

(57) Abstract: A process for performing nucleophilic substitution reactions on aryl diazonium salts or derivatives thereof wherein the aryl diazonium salt is first generated in an aqueous solvent system followed by partitioning of the aryl diazonium salt with a hydrophobic ionic liquid thereby allowing subsequent reaction of the aryl diazonium salt with an appropriate nucleophilic species in the hydrophobic ionic liquid to the desired product without the need to first isolate the aryl diazonium salt.